

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

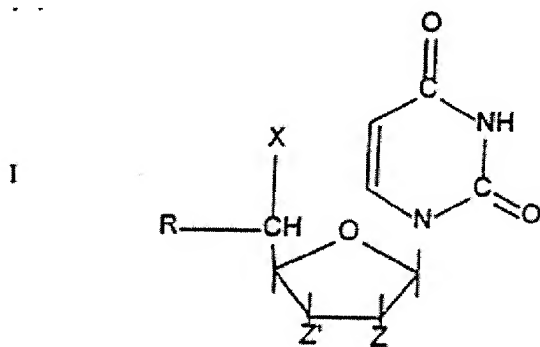
1. (Original) A combinatorial library comprising a predetermined collection of nucleoside peptide molecules for inhibiting the transfer of a sugar from a selected sugar nucleotide donor to a selected acceptor by a carbohydrate processing enzyme wherein a nucleoside peptide molecule comprises (a) a nucleoside monomer; (b) a spacer monomer coupled to the nucleoside monomer wherein the spacer monomer comprises one or more amide linked amino acid residues or mimetics thereof; and (c) cap monomers attached to the spacer monomer; wherein the nucleoside peptide molecules differ from each other as to the identity of at least one element of the nucleoside monomer, spacer monomer or cap monomers.
2. (Original) A combinatorial library as claimed in claim 1 wherein the carbohydrate processing enzyme is a glycosyltransferase involved in the biosynthesis of glycoproteins, glycolipids, or glycosyl phosphatidyl inositols.
3. (Original) A combinatorial library as claimed in claim 2 wherein the carbohydrate processing enzyme is an N-acetylglucosaminyltransferase I, II, II, IV or V, or β -1,3-galactosyl-O-glycosyl-glycoprotein β 1,6-N-acetylglucosaminyl transferase (core 2 GlcNAc).
4. (Previously presented) A combinatorial library as claimed in claim 1 wherein the nucleoside monomer is uridyl, 2'-deoxyuridyl, or 5'-amino-5'-deoxy-2',3'-O-isopropylidene uridyl.
- 5 (Previously presented) A combinatorial library as claimed in claim 1 wherein the cap monomer is methyl (Me), formyl (CHO), ethyl (Et), acetyl (Ac), t-butyl (t-bu),

anisyl, trifluoroacetyl (Tfa), benzoyl (Bz), 4-methylbenzyl (Meb), thioanisyl, thiocresyl, benzyloxymethyl, 4-nitrophenyl (Pnp), benzyloxycarbonyl (Z), 2-nitrobenzoyl (NBz), 2-nitrophenylsulphenyl (Nps), 4-toluenesulphonyl (Tosyl, Tos), pentafluorophenyl (Pfp), diphenylmethyl (Dpm), 2-chlorobenzyloxycarbonyl (Cl-Z), 2,4,5-trichlorophenyl, 2-bromobenzyloxycarbonyl (Br-Z), triphenylmethyl (Trityl, Trt), 2,2,5,7,8-pentamethylchroman-6-sulphonyl (Pmc), t-butyloxycarbonyl (Boc), benzyl (Bzl), benzyloxymethyl (Bom), and 9-fluorenylmethyloxycarbonyl (Fmoc).

6. (Previously presented) A combinatorial library as claimed in claim 1 wherein the spacer monomer is a single amide lined amino acid, an amide linked dipeptide, or an amide linked tripeptide, or a mimetic thereof.

7. (Withdrawn) A nucleoside peptide molecule comprising a nucleoside monomer; a spacer monomer coupled to a nucleoside monomer, wherein the spacer monomer comprises one or more amide linked amino acid residues, or a mimetic thereof; and cap monomers attached to the spacer monomer.

8. (Withdrawn) A nucleoside peptide molecule of the formula 1:



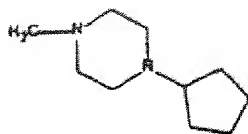
where X is H, -COOH, -OSO₃H, or (CH₂)_qSO₃H where q is 0 or 1, and R represents (Y)_m where Y is an amide linked amino acid residue and m is 1-3, Z' and Z are the same or different and represent hydroxyl or alkoxy, or Z' and Z together form an acetonide group, and wherein free NH₂ groups in the compound of the formula 1 are capped with a cap monomer.

9. (Withdrawn) A nucleoside peptide molecule of the formula 1 as claimed in claim 8 wherein X is H, -COOH, -OSO₃H, or (CH₂)_qSO₃H where q is 0 or 1, Z and Z' are both hydroxyl or together form an acetonide group, R represents -NHCOR¹, wherein R¹ represents

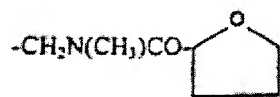
(a) $-\text{C}(\text{CH}_3)(\text{NH}_2)\text{CH}_2-\text{C}_6\text{H}_4-\text{R}^2$, wherein R² is alkoxy; or

(b) $-\text{CHR}^3\text{R}^4$ wherein R³ is hydrogen or -NH₂, and R⁴ is $\text{C}_6\text{H}_4-\text{R}^5$ wherein R⁵ is

halogen, alkyl, or alkoxy,

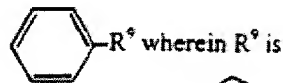


, $-\text{CH}_2\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{R}^6$ or $-\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{R}^6$ wherein R⁶ is halogen,

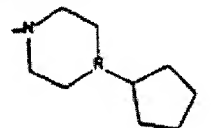
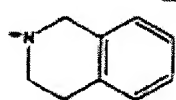
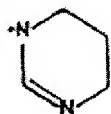
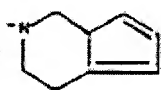


, $-\text{CH}_2\text{N}(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}(\text{CH}_3)\text{OH}$, or $-\text{CH}_2\text{NHCOCH}(\text{CH}_3)_2$, or

R⁴ represents (CH₂)_nR⁸ wherein n = 0 to 5, R⁸ is halogen,



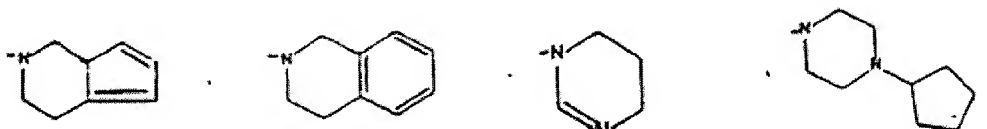
alkoxy,



$-\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{R}^{10}$ wherein R¹⁰ is halogen, $-\text{N}(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}(\text{CH}_3)\text{OH}$, or $-\text{NHCOCH}(\text{CH}_3)_2$ and wherein free amino groups are protected with a cap monomer.

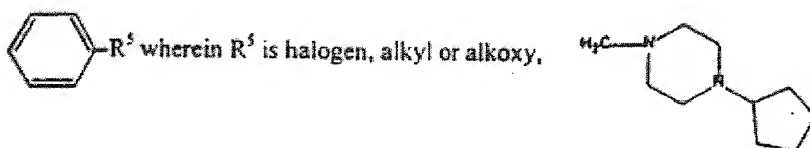
10. (Withdrawn) A nucleoside peptide molecule of the formula I as claimed in claim 8 wherein X is -COOH, and R represents -NHCOR¹ wherein R¹ represents $-\text{CHR}^3\text{R}^4$ wherein R³ is hydrogen, and R⁴ is (CH₂)_nR⁸ wherein n = 0 to 5, preferably 1 to 4, R⁸ is

halogen, $\text{C}_6\text{H}_4-\text{R}^9$ wherein R⁹ is alkoxy, halogen, or alkyl



or $-\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{R}^{10}$ wherein R^{10} is halogen, $-\text{N}(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}(\text{CH}_3)\text{OH}$, or $-\text{NHCOCH}(\text{CH}_3)_2$.

11. (Withdrawn) A nucleoside peptide molecule of the formula I as claimed in claim 8 wherein X is $-\text{COOH}$, and R represents $-\text{NHCOR}^1$ wherein R^1 represents $-\text{CHR}^3\text{R}^4$ wherein R^3 represents $-\text{NH}_2$, and R^4 is



$-\text{CH}_2\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{R}^6$ wherein R^6 is halogen, $-\text{CH}_2\text{N}(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}(\text{CH}_3)\text{OH}$,

$\text{CH}_2\text{NHCOCH}(\text{CH}_3)_2$ or $-\text{CH}_2\text{N}(\text{CH}_3)\text{CO}-$

12. (Withdrawn) A nucleoside peptide molecule of the formula I as claimed in claim 8 wherein X is $-\text{OSO}_3\text{H}$, or $(\text{CH}_2)_q\text{SO}_3\text{H}$ where q is 0 or 1, R represents $-\text{NHCOR}^1$

wherein R^1 represents $-\text{CHR}^3\text{R}^4$ wherein R^3 represents $-\text{NH}_2$ and R^4 is

wherein R^5 is halogen, alkyl, or alkoxy, $-\text{CH}_2\text{N}(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}(\text{CH}_3)\text{OH}$, or

$-\text{CH}_2\text{NHCOCH}(\text{CH}_3)_2$.

13. (Withdrawn) A process for preparing a combinatorial library containing a predetermined collection of nucleoside peptide molecules for inhibiting the transfer of a sugar from a selected sugar nucleotide donor having a heterocyclic amine base, to a selected acceptor by a carbohydrate processing enzyme comprising:

- (a) coupling one or more amino acids, or mimetics thereof to a nucleoside monomer unit which comprises a heterocyclic amine base coupled to a sugar wherein the base corresponds to the heterocyclic amine base of the sugar nucleotide donor, or a modified form or analogue of the base; and

- (b) capping any free functional groups or amine groups with a cap monomer unit.

14. (Withdrawn) A method of using a combinatorial library as claimed in claim 1 for screening for pharmacologically active molecules.

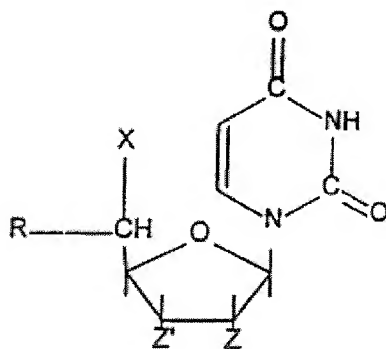
15. (Withdrawn) A solid-phase bioassay for identifying a compound having inhibitory activity against a carbohydrate processing enzyme which comprises (a) coupling an acceptor for the carbohydrate processing enzyme to a polymer and coating onto a carrier; (b) adding a carbohydrate processing enzyme, a sugar nucleotide donor labeled with a detectable substance, and a test compound; (c) measuring the detectable change produced by the detectable substance; and (d) comparing to a control in the absence of the test compound wherein a decrease in the amount of detectable substance with the test compound indicates that the test compound has inhibitory activity against the enzyme.

16. (Withdrawn) A method for identifying a compound that inhibits N-linked oligosaccharide processing comprising (a) reacting a test compound with cells expressing N-linked oligosaccharides in the presence of L-PHA and measuring alkaline phosphatase activity; and (b) comparing to a control in the absence of the compound wherein an increase in alkaline phosphatase activity indicates that the compound inhibits N-linked oligosaccharide processing.

17. (Withdrawn) A pharmaceutical composition containing a compound identified by a method as claimed in claim 1.


18. (New) A combinatorial library as claimed in claim 1 wherein the nucleoside peptide molecule is a compound of the formula I:


I

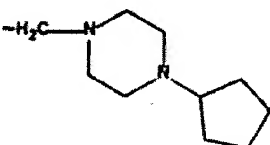



where X is H, $-\text{COOH}$, $-\text{OSO}_3\text{H}$, or $(\text{CH}_2)_q\text{SO}_3\text{H}$ where q is 0 or 1, and R represents $(\text{Y})_m$ where Y is an amide linked amino acid residue and m is 1-3, Z' and Z are the same or different and represent hydroxyl or alkoxy, or Z' and Z together form an acetonide group, and wherein free NH_2 groups in the compound of the formula I are capped with a cap monomer.

19. (New) A combinatorial library as claimed in claim 18 wherein X is H, $-\text{COOH}$, $-\text{OSO}_3\text{H}$, or $(\text{CH}_2)_q\text{SO}_3\text{H}$ where q is 0 or 1, Z and Z' are both hydroxyl or together form an acetonide group, R represents $-\text{NHCOR}^1$, wherein R^1 represents


(a) $-\text{C}(\text{CH}_3)(\text{NH}_2)\text{CH}_2-$  $-\text{R}^2$, wherein R^2 is alkoxy; or

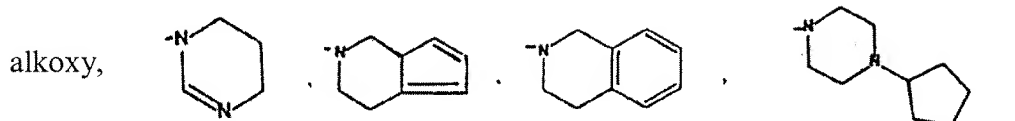
(b) $-\text{CHR}^3\text{R}^4$ wherein R^3 is hydrogen or $-\text{NH}_2$, and R^4 is  $-\text{R}^5$ wherein R^5 is

halogen, alkyl, or alkoxy, , $-\text{CH}_2\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{R}^6$ or

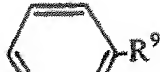
$-\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{R}^6$ wherein R^6 is halogen, $-\text{CH}_2\text{N}(\text{CH}_3)\text{CO}-$ , or

$-\text{CH}_2\text{N}(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}(\text{CH}_3)\text{OH}$, or $-\text{CH}_2\text{NHCOCH}(\text{CH}_3)_2$, or R^4 represents $(\text{CH}_2)_n\text{R}^8$

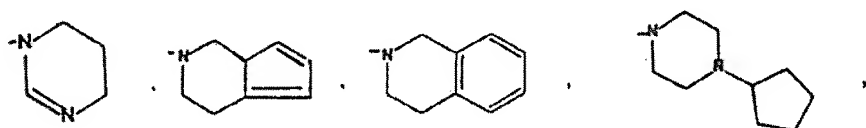
wherein n = 0 to 5, R^8 is halogen,  $-\text{R}^9$ wherein R^9 is



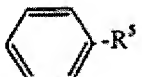
$-N(CH_3)CH_2CH_2R^{10}$ wherein R^{10} is halogen, $-N(C_2H_5)CH_2CH(CH_3)OH$, or $-NHCOCH(CH_3)_2$ and wherein free amino groups are protected with a cap monomer.

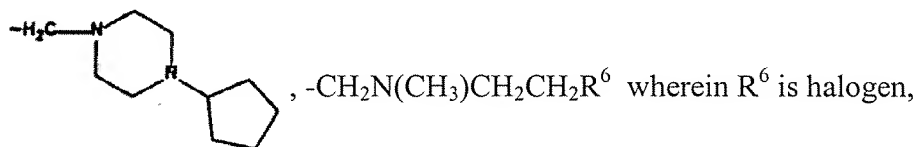
20. (New) A combinatorial library as claimed in claim 18 wherein X is $-COOH$, and R represents $-NHCOR^1$ wherein R^1 represents $-CHR^3R^4$ wherein R^3 is hydrogen, and R^4 is $(CH_2)_nR^8$ wherein $n = 0$ to 5, preferably 1 to 4, R^8 is halogen,  wherein

R^9 is alkoxy, halogen, or alkyl,




or $-N(CH_3)CH_2CH_2R^{10}$ wherein R^{10} is halogen, $-N(C_2H_5)CH_2CH(CH_3)OH$, or $-NHCOCH(CH_3)_2$.

21. (New) A combinatorial library as claimed in claim 18 wherein , X is $-COOH$, and R represents $-NHCOR^1$ wherein R^1 represents $-CHR^3R^4$ wherein R^3 represents $-NH_2$, and R^4 is  wherein R^5 is halogen, alkyl or alkoxy,



22. (New) A combinatorial library as claimed in claim 18 wherein X is $-\text{OSO}_3\text{H}$, or $(\text{CH}_2)_q\text{SO}_3\text{H}$ where q is 0 or 1, R represents $-\text{NHCOR}^1$ wherein R^1 represents $-\text{CHR}^3\text{R}^4$

wherein R^3 represents $-\text{NH}_2$, and R^4 is  $-\text{R}^5$ wherein R^5 is halogen, alkyl, or

alkoxy, $-\text{CH}_2\text{N}(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}(\text{CH}_3)\text{OH}$, or $-\text{CH}_2\text{NHCOCH}(\text{CH}_3)_2$.